

## Weekly Report 05/04/2014

### *The data inspection project*

Statistical Functions Design

1. QQ-Plot
  - a) Functions: exploring the similarity of two ordinal dimensions or inspect the values with specific distribution assumption
  - b) Implementation: applying monetdb quantile() to get quantiles of the two dimensions, plotting QQ-plot
2. Box Plot
  - a) Functions: exploring distribution of single dimension with 7 values --- median, lower/upper quartile, lower/upper adjacent value, outside values (outside of lower/upper quartile  $\pm 1.5r$ )
    - i. interquartile range  $r = \text{distance}(\text{lower quartile}, \text{upper quartile})$
    - ii. upper adjacent value: largest value  $\leq \text{lower/upper quartile} \pm 1.5r$
    - iii. Implementation: applying monetdb quantile() to get quartiles of the dimension, then query to get adjacent values and outside values
3. Curve fitting: LOESS curves
4. banking curves to 45°

### *Miscellaneous*

1. VAST paper review
2. Information Visualization book proof reading

### *Future Work*

1. Implement statistical functions at the server end
2. Advising Yumeng Hou of her thesis project